REMARKS

This is in response to the Office Action mailed on <u>June 3, 2004</u>, and the references cited therewith.

Claim 1 is amended, no claims are canceled, and claims 4-16 are added; as a result, claims 1-16 are now pending in this application.

Disclosure Objections

The Office Action objected to the disclosure at page 19, line 8, indicating that FIG. 5 should be referenced instead of FIG. 4. Applicant believes that FIG. 4 is in fact more appropriate. Table 5 on page 19 includes control couplings, data couplings, and peripheral couplings, all of which are illustrated in FIG. 4. FIG. 5 shows read and write data couplings. Applicant therefore believes that the reference to the configuration shown in FIG. 4 at page 19, line 8 is correct.

Applicant has amended the specification substantially as suggested in the Office Action at paragraph 5, items b and c. Applicant respectfully requests reconsideration and withdrawal of the disclosure objections.

§112 Rejection of the Claims

Claim 1 was rejected under 35 USC § 112. Claim 1 recites the limitation "the preallocated data and code partitioning" in line 8. There is insufficient antecedent basis for this limitation in the claim. Applicant has amended claim 1 correct the antecedent basis issue. Applicant respectfully submits that the amendment does not affect the scope to which claim 1 is entitled. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claim 1.

§102 Rejection of the Claims

Claims 1-3 were rejected under 35 USC § 102(b) as being clearly anticipated by a printed publication from Hassan Gomaa titled "Structuring and Configuring Distributed Applications" (Gomaa). Applicant respectfully traverses the rejection. Anticipation requires the disclosure in a

single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim*." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Applicant respectfully submits that the Office Action did not make out a *prima facie* case of anticipation because the reference does not teach each and every claim element.

For example, Applicant's claim 1 recites a computerized method for determining an allocation of software and data components in a distributed system. It should be noted that Gomaa does not teach a computerized method. Gomaa states in section 5.1 on page 21 "During this phase, decisions have to be made... During Target System Configuration, the following activities need to be performed by the target system engineer:" (emphasis added). Thus Gomaa does not teach a computerized algorithmic method having the same level of detail as shown in Applicant's claims, rather Gomaa provides generalized advice as to factors a system engineer might use to configure a system.

Additionally, Applicant's claim1 recites:

interleaving the preallocated data and control couplings;
defining a set of components according to the interleaved and preallocated
couplings, the components having a data and a code segment; and
determining a modularity of the set of components.

The Office Action states that Gomaa, at section 5.2 on page 22 describes interleaving. Applicant respectfully disagrees with this interpretation of Gomaa. The cited section of Gomaa merely provides a set of factors to consider in configuring a system, and does not provide an algorithm or method to perform in such configuration. Further, neither the cited section nor Gomaa in general use the term "interleaving" or its equivalents. Applicant can find no teaching or suggestion of interleaving preallocated data and control couplings.

For the above reasons, Applicant respectfully submits that Gomaa does not teach each and every element of Applicant's claim 1 as arranged in the claim. Therefore Gomaa does not anticipate Applicant's claim 1. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claim 1.

Claims 2 and 3 depend from claim 1, and therefore inherit the elements of claim 1 while adding further patentable distinctions. These dependent claims are therefore allowable for at least the same reasons as discussed above with respect to claim 1.

Additionally, claims 2 and 3 each recite interleaving code and data. As noted above, Gomaa does not teach or suggest such interleaving. As a result, Gomaa does not teach each and every element of Applicant's claims 2 and 3. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 2 and 3.

New Claims 4-16

Applicant has added new claims 4-16 in this amendment. Support for new claims 4-16 may be found throughout the specification, and in particular on pages 23-29 of the specification. Applicant believes that no new matter has been introduced in the new claims.

Further, Applicant has reviewed the cited references, and can find no teaching of calculating coupling strengths. Further, Applicant can find no teach of using bottleneck rations to determine partitioning. Therefore Applicant submits that new claims 4-16 are allowable over the cited references.

Serial Number: 09/688,006

Filing Date: October 13, 2000

Title: USING CONSTRAINT-BASED HEURISTICS TO SATISFICE STATIC SOFTWARE PARTITIONING AND ALLOCATION OF

HETEROGENEOUS DISTRIBUTED SYSTEMS

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6954 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this day of December, 2004.

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